

REMARKS

Applicant has carefully studied the outstanding Office Action in the present application. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Claim 22 stands rejected under 35 USC, second paragraph as being indefinite. Claim 22 has been amended to overcome the objection.

Claims 1-68, 103-137, 176 and 178 stand rejected under 35 U.S.C. 102(a) as being clearly anticipated by Kalyuzhny et al. (J. Phys. Chem. 2000). Claims 1-29, 32-66, 103-128, 131-137, 176 and 178 stand rejected under 35 USC 102(b) as being clearly anticipated by Schalkhammer et al. or Aussenegg et al.

Applicant has amended independent Claims 1, 32, 103, 176 and 178 to more clearly define the novel features of the present invention. Support for the amendments to the claims can be found in Fig. 2 and the description thereof, inter alia. Applicant has also amended dependent claims where necessary to clarify the invention and to provide proper antecedent basis for all elements claimed therein.

Applicant has added new Claims 182-208, which are similar in scope to Claims 1-2, 5-13, 15-17 and 19-31.

Withdrawn Claims 69-102, 138-175, 177 and 179-181 have been cancelled without prejudice. Additionally, Claims 15, 52 and 115 have been cancelled without prejudice.

In his rejection the Examiner wrote, "Kalyuzhny et al. teach an invention identical to that claimed. This reference qualifies as prior art because the inventive entities are different (e.g. Kalyuzhny et al. has the additional author Abraham Shanzer)." Applicants respectfully submit that there are two additional authors listed on the cited reference, Gonen Ashkenazy and Abraham Shanzer. Applicants respectfully submit that the inventive entity of the cited reference and the present application are the same, since the additional authors did not participate in the inventive process. Applicants have attached disclaiming declarations from co-authors Gonen Ashkenazy

and Abraham Shanzer and a declaration of the inventors in support thereof. Inasmuch as the inventive entity of the cited reference and the present application are the same, the reference is not available to the Examiner as a reference under 35 USC 102(a) or as a publication under 35 USC 102(b) made more than one year prior to the filing of the present application.

Schalkhammer et al. describes a detection scheme based on the increase in the efficiency of a fluorescent probe in the vicinity of metal islands. The measured quantity is the intensity of the fluorescence of a probe molecule. The use of an optically active molecule (fluorophor) is essential for realization of the sensing scheme. The sensing mechanism measures change in the fluorescence of a reporting fluorophor. In the present invention, where the property measured is transmitted radiation following passage of the electromagnetic radiation through the chemical substance-metallic islands moiety and the transparent substrate, optically active molecules are not required. Schalkhammer et al. does not show or suggest generating an optical property measurement of transmitted radiation following passage of the electromagnetic radiation through the chemical substance-metallic islands moiety and the transparent substrate as recited in amended Claims 1, 32, 103, 176 and 178.

Aussenegg et al. describes a detection scheme that measures a change in the interference between two metal layers in a reflection mode utilizing a reflection from a thin layered sensor, consisting of a gold island film and a gold mirror separated by a sensing layer. The proposed configuration is based on optical interference coupling between the metal islands layer and the reflective mirror. Discontinuity of one of the metal layers allows entrance of the analyte into the interlayer spacing and changes its optical properties, which in turn influences the interference between the two layers. The effect does not exist in the absence of the second metal layer (the mirror layer). Additionally, Aussenegg et al. measures reflected radiation while the present invention measures transmitted radiation. Aussenegg et al. does not show or suggest generating an optical property measurement of transmitted radiation following passage of the electromagnetic radiation through the chemical substance-metallic islands moiety and the transparent substrate as recited in amended Claims 1, 32, 103, 176 and 178.

Neither Aussenegg et al. nor Schalkhammer et al. show or suggest generating an optical property measurement of transmitted radiation following passage

of the electromagnetic radiation through the chemical substance-metallic islands moiety and the transparent substrate as recited in new Claim 182.

Applicant respectfully submits that independent Claims 1, 32, 103, 176, 178 and 182 are therefore patentable. Claims 2-31 depend directly or ultimately from Claim 1 and recite additional patentable matter and are therefore deemed allowable. Claims 33-68 depend from directly or ultimately Claim 32 and recite additional patentable matter and are therefore deemed allowable. Claims 104-137 depend directly or ultimately from Claim 103 and recite additional patentable matter and are therefore deemed allowable. Claims 183-208 depend directly or ultimately from Claim 182 and recite additional patentable matter and are therefore deemed allowable.

Applicant reserves the right to pursue the claims as filed in the context of a continuation application.

In view of the foregoing, all of the claims are deemed to be allowable. Favorable reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Julian H. Cohen', with a long horizontal flourish extending to the right.

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